



STIC Search Report

EIC 3700

STIC Database Tracking Number: 209929

TO: Robert Nasser
Location: RND 7a29
Art Unit: 3735
Monday, January 08, 2007

Case Serial Number: 10/687270

From: John Sims
Location: EIC 3700
RND 8B31
Phone: 571 272-3507

john.sims@uspto.gov

Search Notes

Examiner Nasser:

Please examine these results carefully.

I first searched the chemical in Chemical Abstracts, then cross referenced the registry number into a number of other files. This produced what I think are some good results.

I then used a text-based search in various other files, which also produced some results which may be useful.

If I need to re-focus this search, or expand the terminology, please let me know.



STIC Search Results Feedback Form

EIC 3700

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

John Sims, EIC 3700 Team Leader
Ext 23507 RND 8B35

Voluntary Results Feedback Form

➤ I am an examiner in Workgroup: Example: 3730

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/EIC3700 RND 8B31



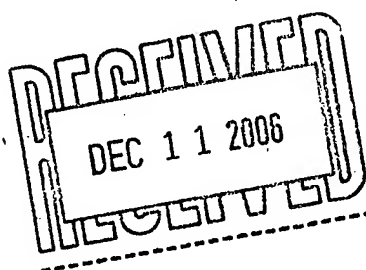
Solomon, Terrance

209929

From: ROBERT NASSER [bob.nasser@uspto.gov]
Sent: Sunday, December 10, 2006 8:11 PM
To: STIC-EIC3700
Subject: Database Search Request, Serial Number: 10687270

Requester:
ROBERT NASSER (P/3735)
Art Unit:
GROUP ART UNIT 3735
Employee Number:
69600
Office Location:
RND 07A29
Phone Number:
(571) 272-4731
Mailbox Number:

Case serial number:
10687270
Class / Subclass(es):
600/304
Earliest Priority Filing Date:
10/16/2003
Format preferred for results:
Paper
Search Topic Information:
i have a verybroad claim



i am looking for usign a specific compound - called michlers hydrol or 4,4'-bis (dimethylamino)-benzhydrol as a color change indicator that changes color in the presence of compounds found in the breath of a human, i.e. sulfur, halides, carbon dioxide, nitrogen

the reference need not be used to analyze breath, just to analyze a compound that might be in exhaled breath

Special Instructions and Other Comments:

4/3,K/3 (Item 1 from file: 34) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
SciSearch(R) Cited Ref Sci

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08134865 **Genuine Article#:** 250CF **No. References:** 9

An automatic measurement of hydrogen cyanide in air by a monitoring tape method

Author: Nakano N (REPRINT) ; Yamamoto A; Kobayashi Y; Nagashima K

Corporate Source: RIKEN KEIKI CO LTD,ITABASHI KU, 2-7-6 AZUSAWA/TOKYO 1748744//JAPAN/
(REPRINT); ANAL CTR CO LTD,SUMIDA KU/TOKYO 1310032//JAPAN/; KOGAKUIN UNIV,FAC
ENGN/HACHIOJI/TOKYO 1920015/JAPAN/

Journal: ANALYTICA CHIMICA ACTA , 1999 , V 398 , N2-3 (OCT 22) , P 305-310

ISSN: 0003-2670 **Publication date:** 19991022

Publisher: ELSEVIER SCIENCE BV , PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS

Language: English **Document Type:** ARTICLE (ABSTRACT AVAILABLE)

Abstract: ...cyanide gas in air using a sensitive tape for hydrogen cyanide. It is based on **color change** of the tape by reaction with hydrogen cyanide. The tape containing silica gel as an absorbent and impregnated with a processing solution that includes 4,4' -bis(**dimethylamino**)diphenylmethane(tetrabase) copper(II) acetate, butylhydroxytoluene, glycerin and methanol was found to be a highly...

?

7/3,K/1 (Item 1 from file: 5) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

Biosis Previews(R)

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0008792362 Biosis No.: 199395094628

Reduction in the levels of oral malodor precursors by hydrogen peroxide: In vitro and in vivo assessments

Author: Grigor J; Roberts A J

Author Address: Unilever Dental Res., Port Sunlight Lab., Quarry Road East, Bebington, Wirral, England**England

Journal: Journal of Clinical Dentistry 3 (4): p 111-115 1992

ISSN: 0895-8831

Document Type: Article

Record Type: Abstract

Language: English

Abstract: ...In both cases the concentration of thiol groups was determined colorimetrically by quantitative reaction with 4,4'- bis (dimethylamino) diphenyl carbinol. Addition of volumes of hydrogen peroxide solution (containing between 0.18 and 0...

Descriptors:

Miscellaneous Terms: ...**HALITOSIS**;

7/3,K/2 (Item 1 from file: 155) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

MEDLINE(R)

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09519286 PMID: 1339126

Reduction in the levels of oral malodor precursors by hydrogen peroxide: in-vitro and in-vivo assessments.

Grigor J; Roberts A J

Unilever Dental Research, Port Sunlight Laboratory, Bebington, Wirral, England.

Journal of clinical dentistry (UNITED STATES) 1992 , 3 (4) p111-5 , ISSN: 0895-8831--Print **Journal Code:** 8904411

Publishing Model Print

Document type: Clinical Trial; Journal Article; Randomized Controlled Trial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...In both cases the concentration of thiol groups was determined colorimetrically by quantitative reaction with 4,4'- bis (dimethylamino) diphenyl carbinol. Addition of volumes of hydrogen peroxide solution (containing between 0.18 and 0...

Descriptors: *Halitosis--prevention and control--PC; *Hydrogen Peroxide --therapeutic use--TU;

*Saliva--chemistry--CH; *Sulphydryl Compounds --metabolism...

RNasser

ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:594547 CAPLUS
DOCUMENT NUMBER: 107:194547
TITLE: Test strips for halitosis detection
INVENTOR(S): Iwakawa, Masaharu
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|----------|
| JP 62115364 | A | 19870527 | JP 1985-255536 | 19851114 |
| JP 06041949 | B | 19940601 | | |

PRIORITY APPLN. INFO.: JP 1985-255536 19851114

AB A test strip for mercaptan detection for halitosis diagnosis (based on color changes) consists of bis(4-dimethylaminophenyl)methanol or bis(4-diethylaminophenyl)methanol. Filter papers (Toyo Filter Paper number 131) were soaked in a Permanent Yellow Lemon number 631 suspension, dried, again soaked in a solution containing bis(4-dimethylaminophenyl)methanol (0.4 mg), acetone (10 mL) and pH 5.01 citrate buffer (2 mL) and freeze dried. The paper was cut to strips (6 x 10 mm) and attached to a plastic holder. Development of a yellow color is indicative of pos. results.

L5 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:12715 CAPLUS
DOCUMENT NUMBER: 100:12715
TITLE: Visual chemical indicating composition for monitoring sterilization
INVENTOR(S): Tratnyek, Joseph P.
PATENT ASSIGNEE(S): American Sterilizer Co., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| US 4407960 | A | 19831004 | US 1980-162811 | 19800625 |
| CA 1170551 | A1 | 19840710 | CA 1981-380496 | 19810624 |

PRIORITY APPLN. INFO.: US 1980-162811 A 19800625

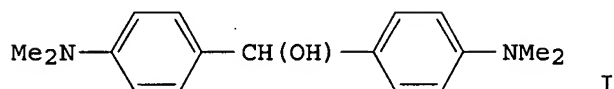
AB An indicator system and device for monitoring ethylene oxide [75-21-8] sterilization in which color changes are progressive with conditions and period of sterilization comprises a leuco precursor of an arylmethane dye and an acid. The composition is integrated into a carrier and a polymer binder is used to form a coated ticket or tape device. Systems were prepared using alc. soluble nylon or Et cellulose as polymer binders, Michler's hydrol [119-58-4] as leuco dye, 4,4-bis(4-hydroxyphenyl)pentanoic acid [126-00-1] or styrene-maleic anhydride polymer [9011-13-6] as acid component, and MeOH, CH₂Cl₂, or Me₂CO as solvents. The systems change from a dark blue to colorless on sterilization by ethylene oxide.

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L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:50019 CAPLUS
DOCUMENT NUMBER: 98:50019
TITLE: Color indicator for bad breath
PATENT ASSIGNEE(S): Kao Soap Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 57135360 | A | 19820820 | JP 1981-21278 | 19810216 |
| JP 62051425 | B | 19871029 | | |
| PRIORITY APPLN. INFO.: | | | JP 1981-21278 | 19810216 |

GI



AB Compns. containing 4,4'-bisdimethylaminodiphenylcarbitol (I) and a surfactant quant. indicate the intensity of bad breath caused by SH compds. from protein decomposition The blue color of I fades in the presence of SH compds. and its sensitivity increases with a surfactant. Measurements may be made on breath or saliva samples.

=>

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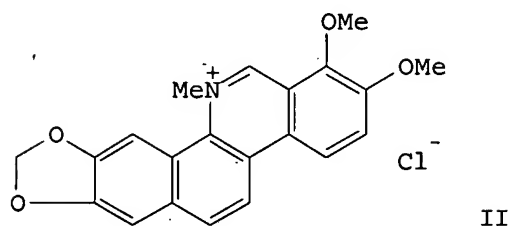
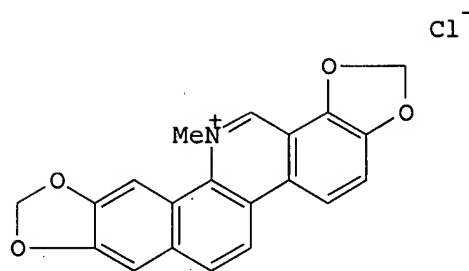
ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:563956 CAPLUS <<LOGINID::20070108>>
DOCUMENT NUMBER: 135:119229
TITLE: Container for testing bad breath
INVENTOR(S): Yamamoto, Tatsuo; Oka, Takayuki
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2001208753 | A | 20010803 | JP 2000-22189 | 20000131 |
| PRIORITY APPLN. INFO.: | | | JP 2000-22189 | 20000131 |

AB A convenient container is provided for accurately testing bad breath after collecting a saliva sample. The container is equipped with a tube having a closed bottom and an opening at one end, and a plug for tightly closing the opening of the tube. A test piece for measuring bad breath is accommodated in the tube with a closed bottom, and a marker displaying the saliva quantity is installed on the tube with a closed bottom. Diagrams describing the container assembly is given.

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:10366 CAPLUS <<LOGINID::20070108>>
DOCUMENT NUMBER: 104:10366
TITLE: Sanguinaria extract, a new agent for the control of volatile sulfur compounds in the oral cavity
AUTHOR(S): Boulware, R. T.; Southard, G. L.; Yankell, S. L.
CORPORATE SOURCE: Vipont Lab. Inc., Fort Collins, CO, 80524, USA
SOURCE: Journal of the Society of Cosmetic Chemists (1985), 36(4), 297-302
CODEN: JSCCA5; ISSN: 0037-9832
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

RNasser



AB Besides antiplaque properties, Sanguinaria extract containing Sanguinarine chloride (I) [5578-73-4] and chelerythrine (II) [34316-15-9] was effective in controlling the volatile sulfur compds. (VSC) responsible for bad breath. The relative effectiveness of several com. oral rinses in controlling VSC was evaluated using incubated salivary samples and a colorimetric method of sulphhydryl anal. This screening method employed 4,4'-bis(dimethylamino)diphenylcarbinol [119-58-4], a thiol-sensitive reagent, and inexpensive instrumentation. Among the 4 rinses tested, an oral rinse containing Sanguinaria extract and ZnCl₂ was more effective (99% confidence level) in reducing measurable VSC levels than rinses containing Zn²⁺ alone, a mixture of cetylpyridinium chloride [123-03-5] and domiphen bromide [538-71-6], or a rinse compounded with a high concentration of essential oils.

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1983:50019 CAPLUS <<LOGINID::20070108>>

DOCUMENT NUMBER: 98:50019

TITLE: Color indicator for bad breath

PATENT ASSIGNEE(S): Kao Soap Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

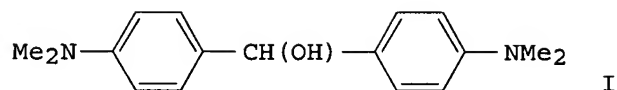
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 57135360 | A | 19820820 | JP 1981-21278 | 19810216 |
| JP 62051425 | B | 19871029 | | |
| PRIORITY APPLN. INFO.: | | | JP 1981-21278 | 19810216 |
| GI | | | | |

RNasser



AB Compns. containing 4,4'-bisdimethylaminodiphenylcarbitol (I) and a surfactant quant. indicate the intensity of bad breath caused by SH compds. from protein decomposition. The blue color of I fades in the presence of SH compds. and its sensitivity increases with a surfactant. Measurements may be made on breath or saliva samples.

=> lo

LO IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

? d s

| Set | Items | Description |
|-----|---------|--|
| S1 | 6 | S MICHLER?()HYDROL |
| S2 | 1961941 | S BREATH??? OR SALIVA OR EXHAL????? OR COMPOUND? ? |
| S3 | 4 | S S1 AND S2 |
| S4 | 213 | S 4()4()BIS()DIMETHYLAMINO |
| S5 | 336 | S BENZHYDROL? ? |
| S6 | 526 | S S4 OR S5 |
| S7 | 45388 | S (COLOR??? OR COLOUR???) (5N)CHANG??? |
| S8 | 272 | S S2 AND S6 |
| S9 | 9 | S S7 AND S8 |
| S10 | 9 | S S9 NOT S3 |

? show files

[File 347] **JAPIO** Dec 1976-2006/Sep(Updated 061230)

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[File 350] **Derwent WPIX** 1963-2006/UD=200702

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[File 371] **French Patents** 1961-2002/BOPI 200209

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**File 371: This file is not currently updating. The last update is 200209.*

? d s

| Set | Items | Description |
|-----|-------|--------------------|
| S1 | 11 | S MICHLER?()HYDROL |
| S2 | 11 | RD (unique items) |

; show files

[File 2] INSPEC 1898-2006/Dec W2

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[File 5] Biosis Previews(R) 1969-2007/Dec W5

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[File 6] NTIS 1964-2007/Dec W4

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[File 8] Ei Compendex(R) 1970-2007/Dec W5

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[File 34] SciSearch(R) Cited Ref Sci 1990-2007/Dec W5

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[File 35] Dissertation Abs Online 1861-2006/Nov

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[File 98] General Sci Abs 1984-2006/Dec

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[File 99] Wilson Appl. Sci & Tech Abs 1983-2006/Nov

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[File 144] Pascal 1973-2006/Dec W1

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[File 434] SciSearch(R) Cited Ref Sci 1974-1989/Dec

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[File 441] **ESPICOM Pharm&Med DEVICE NEWS 2007/Jul W1**

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```
? d s
Set      Items  Description
S1        301   S MICHLER?()HYDROL? OR 4()4(1N)BIS()DIMETHYLAMINO
S2       71856   S (COLOR????? OR COLOUR?????) (6N) (CHANG??? OR INDICAT?????)
S3         7    S S1 AND S2
S4         3    RD (unique items)
S5      727742   S BREATH??? OR EXHAL????? OR HALITOSIS? OR EXPIRAT???? OR ASPIRAT?????
S6         2    S S1 AND S5
S7         2    S S6 NOT S4
; show files
```

[File 2] **INSPEC** 1898-2006/Dec W2

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[File 8] **Ei Compendex(R)** 1970-2007/Dec W5

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[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2006/Nov

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[File 144] **Pascal** 1973-2006/Dec W1

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[File 155] **MEDLINE(R)** 1950-2006/Dec 06

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[File 441] **ESPICOM Pharm&Med DEVICE NEWS** 2007/Jul W1
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? d s

| Set | Items | Description |
|-----|-------|--|
| S1 | 0 | S MICHLER? ?()HYDROL OR 4()4(1N)BIS()DIMETHYLAMINO()BENZHYDROL |
| S2 | 7 | S 4()4()BIS()DIMETHYLAMINO |
| S3 | 6 | RD (unique items) |

; show files

[File 16] **Gale Group PROMT(R)** 1990-2007/Jan 03

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[File 9] **Business & Industry(R)** Jul/1994-2007/Jan 03

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[File 148] **Gale Group Trade & Industry DB** 1976-2007/Jan 01

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[File 621] **Gale Group New Prod. Annou.(R)** 1985-2007/Dec 29

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d his

(FILE 'HOME' ENTERED AT 14:14:33 ON 08 JAN 2007)

FILE 'REGISTRY' ENTERED AT 14:14:59 ON 08 JAN 2007

E "MICHLER'S HYDROL"/CN

L1 1 S E3

FILE 'MEDLINE, BIOSIS, EMBASE, PASCAL, JICST-EPLUS, CAPLUS' ENTERED AT
14:16:10 ON 08 JAN 2007

L2 280 S L1

L3 52408 S (COLOR OR COLOUR) (6W) (CHANG### OR INDICAT####)

L4 9 S L2 AND L3

L5 9 DUP REMOVE L4 (0 DUPLICATES REMOVED)

RNasser

d his

(FILE 'HOME' ENTERED AT 11:56:54 ON 08 JAN 2007)

FILE 'REGISTRY' ENTERED AT 11:57:15 ON 08 JAN 2007

E MICHLEERS HYDROL/CN

E MICHLER

E MICHLER/CN

L1 1 S E9

FILE 'BIOSIS, MEDLINE, CASREACT, CAPLUS, IFIPAT, PIRA' ENTERED AT
12:00:04 ON 08 JAN 2007

L2 316 S L1

L3 3296707 S BREATH### OR X

L4 173061 S BREATH### OR EXHAL?

L5 5 S L2 AND L4